

OPINION

A clean energy power system isn't as simple as flipping a switch

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New England's energy future is in the wind and the sun. It's in batteries, increased imported clean energy, and new technologies under development. Projects looking to connect to the region's grid are almost exclusively renewable, storage, or imports. State and federal policies, such as the [Inflation Reduction Act](#), add momentum toward our shared goal of a clean and reliable energy future.

Getting to a power system that runs on primarily clean energy isn't as simple as flipping a switch, but the decarbonization goals set by the states guide the region toward that end. Renewable energy's share of the power mix grows each year, leading oil and coal plants to either retire or run less frequently. These carbon-intensive resources provided [less than 1 percent of the region's electricity in 2021](#).

As the region's not-for-profit grid operator and market administrator, [ISO New England](#) has been [working for over a decade](#) to integrate clean energy resources into the region's operations, markets, and long-term planning. While there is progress, there remains much work to do and challenges to overcome.

The region will need to make significant investments in building critical infrastructure, including new transmission lines to carry energy generated by offshore wind and solar farms to its destination. In addition, existing power plants and [fuel sources](#) will need to be retained and maintained to provide critical energy supply reserves until [long-duration storage technologies](#) take hold.

Regional transportation and heating initiatives to switch to battery-powered cars and replace gas and oil furnaces with electric heat pumps are expected to double electricity demand. That means the region will not only need to build enough clean resources to replace existing fossil fuel plants, but also meet the added demand.

In addition to billions of dollars in new investment, these new projects will require dozens of siting decisions to be made in a region notorious for difficult siting processes.

Some [portray](#) the region's wholesale electricity markets, through which billions of dollars in electricity is bought and sold each year, as barriers impeding the development of clean energy projects. The truth, however, is that large-scale renewable projects are financed primarily through state-sponsored, long-term contracts funded by ratepayers and do not rely on the markets administered by ISO New England. These projects have stalled for two main reasons: delays in siting and permitting, and supply chain issues causing delays or significantly increasing costs.

Recent headlines have driven these points home. [Offshore wind developers](#) have highlighted financing, regulatory barriers, and supply chain issues as threats to their projects, while the fate of a transmission line intended to bring Canadian hydropower through Maine [remains tied up in court](#). The five-turbine Block Island Wind Farm is the nation's only operational offshore wind project.

The reality is that many things have to be in place to facilitate clean energy growth, and the ISO is doing its part to make it possible. Innovative rules to enable renewable energy to set market prices, transmission studies that inform developers and states on access points to the grid, and the creation of state-of-the-art forecasting tools all show the ISO has been quietly building the foundation needed for the future grid.

Over the past year, the ISO has conducted a number of studies that lay the groundwork for the decisions facing the region. These studies look at the ability of [different market designs](#) to meet state goals, the [operational and reliability challenges](#) that may develop during the transition, and the required transmission system upgrades.

State and federal policymakers, the energy industry, and the ISO must now make the decisions that will chart the path over the next several decades. How will the region attract and retain the resources needed to power our homes

and businesses? How will utilities site and develop the transmission and distribution infrastructure needed to move that power around? How will the ISO maintain system reliability throughout the transition? And how will policymakers determine how to pay for it? The answers to these questions will go a long way toward determining success.

Restructuring most of the region's power system from one dominated by monopoly utilities to one based on a competitive marketplace has led to a 40 percent reduction in [carbon emissions](#) as newer, more efficient, cost-effective resources caused older power plants to retire. That transition was a community effort involving difficult decisions made despite opposing viewpoints.

As we embark on the region's next great transition, New England must find a way, through collaboration and determination, to solve these often conflicting challenges. ISO New England is ready to fulfill our part.

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